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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,522	11/21/2007	Tsuyoshi Tatsukawa	36856.1342	9096

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EXAMINER
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LIAN, MANGTIN B.

ART UNIT	PAPER NUMBER
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2832

NOTIFICATION DATE	DELIVERY MODE
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01/05/2010

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/531,522	<b>Applicant(s)</b> TATSUKAWA ET AL.	
	<b>Examiner</b> MANGTIN LIAN	<b>Art Unit</b> 2832	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 October 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 9-27 is/are pending in the application.
- 4a) Of the above claim(s) 19-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 9-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2007 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)                        | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of Group I, claims 9-18 in the reply filed on 10/28/2009 is acknowledged.

### ***Drawings***

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "spiral coil" of claim 18 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New

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Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Applicant should clarify what is intended by "the inner conductor pattern layers is made of a conductive paste including resin particles that are consumed the firing step."

***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 9-12, and 17-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ibata et al. (U. S. Patent No. 6,169,470 B1).

**With respect to Claim 9**, Ibata et al., hereinafter referred to as "Ibata," teaches a laminated ceramic electronic component (Fig. 1) comprising:

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a ceramic laminated member 3;

an inner conductor 5 provided inside of the ceramic laminated member 3;

an outer electrode 11 provided on the surface of the ceramic laminated member 3; and

a lead conductor 7 connecting the inner conductor 5 to the outer electrode 11; wherein

a thickness of the lead conductor 7 is less than a thickness of the inner conductor 5

(compare the thickness of lead conductor 7 and inner conductor 5 in Fig. 1) (col. 3, lines 22-31, 47-55, 60-63).

**With respect to Claim 10**, Ibata discloses the laminated ceramic electronic component (Fig. 35) according to claim 9, wherein a conductor width of the lead conductor 52 is greater than a conductor width of the inner conductor 54 (see Fig. 35 for illustration) (col. 1, lines 24-30).

**With respect to Claim 11**, Ibata teaches the laminated ceramic electronic component according to claim 9, wherein the inner conductor 5 defines a coil (col. 3, lines 30-35).

**With respect to Claim 12**, Ibata teaches the laminated ceramic electronic component according to claim 9, wherein the inner conductor 5 includes a plurality of inner conductor pattern layers (4 layers) and the lead conductor 7 includes a plurality of lead conductor pattern layers (top lead conductor pattern layer 7 and bottom lead conductor pattern layer 6), the number of lead conductor pattern layers (2 layers) of said plurality of lead conductor 7 pattern layers is less than the number of inner conductor 5 pattern layers of said plurality of inner conductor pattern layers (4 layers) (see Fig. 1 for illustration).

**With respect to Claim 17**, Ibata teaches the laminated ceramic electronic component according to claim 12, wherein each of the plurality of inner conductor pattern layers is substantially U- shaped (see Fig. 18 for illustration) (see also Fig. 35, col. 1, lines 31-35).

**With respect to Claim 18**, Ibata teaches the laminated ceramic electronic component according to claim 12, wherein the inner conductor is a spiral coil (col. 10, lines 15-18).

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ibata et al. (U. S. Patent No. 6,169,470 B1).

**With respect to Claim 13**, Ibata teaches the laminated ceramic electronic component according to claim 9. Ibata does not expressly teach the laminated ceramic electronic component, wherein a metal content of the lead conductor is greater than a metal content of the inner conductor. However, it would have been an obvious design choice at the time the invention was made to a person having ordinary skill in the art to increase the content of metal of the lead conductor to improve conductivity to meet design requirements for a specific application since it has been held to be within the

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general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

**With respect to Claim 14**, Ibata teaches the laminated ceramic electronic component according to claim 9. Ibata does not expressly teach laminated ceramic electronic component, wherein the thickness of the inner conductor is in the range of about 70 pm to about 80 microns, and the thickness of the lead conductor is in the range of about 35 microns to about 40 microns. However, it would have been obvious design choice at the time the invention was made to a person having ordinary skill in the art to use the claimed inner conductor and lead conductor thickness to meet design requirements for a specific application since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Furthermore, a change in size is generally recognized as being within the level of ordinary skill in the art. *In re Rose*, 105, UPQ 237 (CCPA 1955).

9. Claims 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ibata et al. (U. S. Patent No. 6,169,470 B1), as applied to claim 12 above, in view of Kobayashi (U. S. Patent No. 6,229,425 B1).

**With respect to Claim 15**, Ibata teaches the laminated ceramic electronic component according to claim 12. Ibata does not teach the laminated ceramic electronic component, wherein the number of inner conductor pattern layers is 10 and the number of lead conductor pattern layers is 5.

In the same field of invention, Kobayashi teaches a laminated ceramic electronic component 10 (FIG. 1), wherein the number of inner conductor pattern layers is 10 (12a, 13a, 15, 15, 17, 19, 20, 21, 12b, and 13b) and the number of lead conductor pattern layers is 5 (11a, 14a, 18, 11b, and 14b) (col. 3, lines 22-30). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the number of inner conductor pattern and the lead conductor teaching of Kobayashi in the laminated ceramic electronic component to improve reliability and reduce manufacturing cost (col. 2, lines 4-6).

10. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ibata et al. (U. S. Patent No. 6,169,470 B1), as applied to claim 12 above, in view of Konoue et al. (U. S. Pub. No. 2004/0084131 A1).

**With respect to Claim 16**, Best understood in view of 35 USC 112 second paragraph rejection, Ibata teaches the laminated ceramic electronic component according to claim 12. Ibata does not teach the laminated ceramic electronic component, wherein at least one of the inner conductor pattern layers is made of a conductive paste including resin particles that are consumed the firing step.

In the same field of invention, Konoue et al., hereinafter referred to as “Konoue,” teaches a laminated ceramic electronic component (FIG. 1), wherein at least one of the inner conductor 3 pattern layers is made of a conductive paste including resin particles (para. 0029). It would have been obvious at the time the invention was made to a person having ordinary skill in the art to use the conductive paste materials of



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Konoue in the laminated ceramic electronic component of Ibata to improve reliability, resistance to flux, and satisfactory electrical properties without the occurrence of structural defects, such as cracks, delamination (para. 0011). The limitation "consumed the firing step" is considered, but not given patentable weight because the limitation is merely a product-by-process claim that does not structurally distinguish the claimed invention over the prior art. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or obvious over the prior art, the claim is unpatentable even though the prior product was made by a different process. In re Thorpe, 227 USPQ 964,966.

### ***Conclusion***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. A list of pertinent prior art is attached in form PTO-892.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MANGTIN LIAN whose telephone number is (571)270-5729. The examiner can normally be reached on Mon - Thurs 0800 - 1700 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Elvin G. Enad can be reached on 571-272-1990. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. L./

Examiner, Art Unit 2832

/Lincoln Donovan/

Supervisory Patent Examiner, Art Unit 2816